

| Manhole Number                 | Cover Level     | Connections | Pipe                                           |                                                     |                                 | Manhole Size | Types       |              |
|--------------------------------|-----------------|-------------|------------------------------------------------|-----------------------------------------------------|---------------------------------|--------------|-------------|--------------|
| Coordinates                    | Depth To Invert |             | Pipework                                       | Inverts                                             | Diams                           |              | Manhole     | Cover        |
| <b>S1</b>                      | 125.388         |             | 1 CLAY                                         | 124.100                                             | 150                             | 1200         | TYPE B CONC | B125 600x600 |
| E. 329146.210<br>N. 343607.899 | 1.288           |             | 0 CLAY                                         | 124.100                                             | 150                             |              |             |              |
| <b>S2</b>                      | 125.386         |             | 1 CLAY<br>2 CLAY<br>3 CLAY<br>4 CLAY           | 124.022<br>124.022<br>124.022<br>124.022            | 150<br>150<br>150<br>150        | 1200         | TYPE B CONC | B125 600x600 |
| E. 329154.824<br>N. 343611.465 | 1.364           |             | 0 CLAY                                         | 124.022                                             | 150                             |              |             |              |
| <b>S3</b>                      | 125.377         |             | 1 CLAY<br>2 CLAY<br>3 CLAY<br>4 CLAY           | 123.894<br>123.894<br>123.894<br>123.894            | 150<br>150<br>150<br>150        | 1200         | TYPE B CONC | B125 600x600 |
| E. 329169.585<br>N. 343615.560 | 1.483           |             | 0 CLAY                                         | 123.894                                             | 150                             |              |             |              |
| <b>S4</b>                      | 125.670         |             | 1 CLAY                                         | 124.700                                             | 150                             | 1200         | TYPE B CONC | B125 600x600 |
| E. 329208.338<br>N. 343618.724 | 0.970           |             | 0 CLAY                                         | 124.700                                             | 150                             |              |             |              |
| <b>S5</b>                      | 125.466         |             | 1 CLAY<br>2 CLAY<br>3 CLAY<br>4 CLAY           | 124.480<br>124.480<br>124.480<br>124.480            | 150<br>150<br>150<br>150        | 1200         | TYPE B CONC | B125 600x600 |
| E. 329189.747<br>N. 343617.321 | 0.986           |             | 0 CLAY                                         | 124.480                                             | 150                             |              |             |              |
| <b>S6</b>                      | 125.300         |             | 1 CLAY<br>2 CLAY                               | 123.791<br>123.791                                  | 150<br>150                      | 1200         | TYPE B CONC | B125 600x600 |
| E. 329180.961<br>N. 343616.343 | 1.584           |             | 0 CLAY                                         | 123.716                                             | 225                             |              |             |              |
| <b>S7</b>                      | 124.846         |             | 1 CLAY<br>2 CLAY<br>3 CLAY                     | 123.590<br>123.665<br>123.665                       | 225<br>150<br>150               | 1200         | TYPE B CONC | B125 600x600 |
| E. 329184.055<br>N. 343594.234 | 1.256           |             | 0 CLAY                                         | 123.590                                             | 225                             |              |             |              |
| <b>S8</b>                      | 124.531         |             | 1 CLAY<br>2 CLAY<br>3 CLAY<br>4 CLAY<br>5 CLAY | 123.469<br>123.544<br>123.544<br>123.544<br>123.544 | 225<br>150<br>150<br>150<br>150 | 1200         | TYPE B CONC | B125 600x600 |
| E. 329189.579<br>N. 343574.372 | 1.062           |             | 0 CLAY                                         | 123.469                                             | 225                             |              |             |              |
| <b>S9</b>                      | 124.861         |             | 1 CLAY<br>2 CLAY                               | 123.750<br>123.750                                  | 150<br>150                      | 1200         | TYPE B CONC | B125 600x600 |
| E. 329-<br>N. 343-             | 1.111           |             | 0 CLAY                                         | 123.750                                             | 150                             |              |             |              |
| <b>S10</b>                     | 124.327         |             | 1 CLAY<br>2 CLAY<br>3 CLAY<br>4 CLAY<br>5 CLAY | 123.491<br>123.491<br>123.491<br>123.491<br>123.491 | 150<br>150<br>150<br>150<br>150 | 1200         | TYPE B CONC | B125 600x600 |
| E. 329196.078<br>N. 343566.567 | 0.836           |             | 0 CLAY                                         | 123.491                                             | 150                             |              |             |              |
| <b>S11</b>                     | 124.384         |             | 1 CLAY<br>2 CLAY                               | 123.107<br>123.032                                  | 150<br>225                      | 1350         | TYPE B CONC | B125 600x600 |
| E. 329191.812<br>N. 343565.373 | 1.502           |             | 0 CONC                                         | 122.882                                             | 375                             |              |             |              |
| <b>S12</b>                     | 124.625         |             | 1 CONC<br>2 CLAY<br>3 CLAY                     | 122.770<br>122.995<br>122.995                       | 375<br>150<br>150               | 1350         | TYPE B CONC | B125 600x600 |
| E. 329193.585<br>N. 343556.764 | 1.855           |             | 0 CONC                                         | 122.770                                             | 375                             |              |             |              |
| <b>S13</b>                     | 123.917         |             | 1 CONC<br>2 CLAY<br>3 CLAY                     | 122.528<br>122.753<br>122.753                       | 375<br>150<br>150               | 1350         | TYPE B CONC | B125 600x600 |
| E. 329197.529<br>N. 343537.621 | 1.389           |             | 0 CONC                                         | 122.528                                             | 375                             |              |             |              |
| <b>S14</b>                     | 125.940         |             | 1 CLAY<br>2 CLAY<br>3 CLAY                     | 124.900<br>124.900<br>124.900                       | 150<br>150<br>150               | 1200         | TYPE B CONC | B125 600x600 |
| E. 329218.507<br>N. 343627.681 | 1.040           |             | 0 CLAY                                         | 124.900                                             | 150                             |              |             |              |

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|--------------------------------|-----------------|-------------|------------------------------------------------------------------------------|------------------------------------------|--------------------------|--------------|-------------|---------------|
| Coordinates                    | Depth To Invert |             | Pipework                                                                     | Inverts                                  | Diams                    |              | Manhole     | Cover         |
| S15                            | 125.653         |             | 1<br>2<br>3<br>CLAY<br>CLAY<br>CLAY                                          | 124.719<br>124.719<br>124.719            | 150<br>150<br>150        | 1200         | TYPE B CONC | B125 600x600  |
| E. 329223.322<br>N. 343610.311 | 1.009           |             | 0<br>CLAY                                                                    | 124.644                                  | 225                      |              |             |               |
| S16                            | 125.344         |             | 1<br>2<br>3<br>4<br>CLAY<br>CLAY<br>CLAY<br>CLAY                             | 124.435<br>123.510<br>123.510<br>123.510 | 225<br>150<br>150<br>150 | 1200         | TYPE B CONC | B125 600x600  |
| E. 329228.610<br>N. 343558.729 | 0.909           |             | 0<br>CLAY                                                                    | 124.435                                  | 225                      |              |             |               |
| S17                            | 125.133         |             | 1<br>2<br>3<br>CLAY<br>CLAY<br>CLAY                                          | 124.195<br>124.270<br>124.270            | 225<br>150<br>150        | 1200         | TYPE B CONC | B125 600x600  |
| E. 329232.795<br>N. 343571.735 | 0.938           |             | 0<br>CLAY                                                                    | 124.195                                  | 225                      |              |             |               |
| S18                            | 124.700         |             | 1<br>2<br>3<br>CLAY<br>CLAY<br>CLAY                                          | 123.744<br>124.819<br>124.819            | 225<br>150<br>150        | 1200         | TYPE B CONC | B125 600x600  |
| E. 329239.307<br>N. 343550.085 | 0.956           |             | 0<br>CLAY                                                                    | 123.744                                  | 225                      |              |             |               |
| S19                            | 124.516         |             | 1<br>CLAY                                                                    | 123.500                                  | 150                      | 1200         | TYPE B CONC | B125 600x600  |
| E. 329258.396<br>N. 343541.062 | 1.016           |             | 0<br>CLAY                                                                    | 123.500                                  | 150                      |              |             |               |
| S20                            | 124.382         |             | 1<br>2<br>CLAY<br>CLAY                                                       | 123.342<br>123.342                       | 150<br>150               | 1200         | TYPE B CONC | B125 600x600  |
| E. 329261.382<br>N. 343530.669 | 1.040           |             | 0<br>CLAY                                                                    | 123.342                                  | 150                      |              |             |               |
| S21                            | 123.493         |             | 1<br>2<br>CLAY<br>CONC                                                       | 122.518<br>121.973                       | 150<br>375               | 1350         | TYPE B CONC | B125 600x600  |
| E. 329213.839<br>N. 343518.843 | 1.595           |             | 0<br>CONC                                                                    | 121.898                                  | 450                      |              |             |               |
| S22                            | 123.585         |             | 1<br>CLAY                                                                    | 122.285                                  | 150                      | 1200         | TYPE B CONC | B125 600x600  |
| E. 329178.246<br>N. 343533.013 | 1.300           |             | 0<br>CLAY                                                                    | 122.285                                  | 150                      |              |             |               |
| S23                            | 123.500         |             | 1<br>2<br>CONC<br>CLAY                                                       | 121.804<br>121.784                       | 450<br>150               | 1500         | FC MH CONC  | C250 1220x675 |
| E. 329183.745<br>N. 343511.036 | 2.066           |             | 0<br>CLAY                                                                    | 121.434                                  | 150                      |              |             |               |
| S24                            | 122.609         |             | 1<br>CLAY                                                                    | 121.186                                  | 150                      | 1200         | TYPE B CONC | B125 600x600  |
| E. 329189.301<br>N. 343487.610 | 1.423           |             | 0<br>CLAY                                                                    | 121.186                                  | 150                      |              |             |               |
| S25                            | 121.490         |             | 1<br>CLAY                                                                    | 120.424                                  | 150                      | 1200         | TYPE B CONC | B125 600x600  |
| E. 329170.771<br>N. 343483.199 | 1.066           |             | MANHOLE TO BE BUILT ON LINE OF EXISTING CULVERT (EXACT LEVEL & LOCATION TBC) |                                          |                          |              |             |               |

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|--------------------------------|-----------------|-------------|----------|---------|-------|--------------|----------------------|--------------|
| Coordinates                    | Depth To Invert |             | Pipework | Inverts | Diams |              | Manhole              | Cover        |
| <b>L1</b>                      | 126.000         |             | 1 PERF   | 124.950 | 150   | 1200         | TYPE B CONC CATCHPIT | B125 600x600 |
| E. 329150.428<br>N. 343634.316 | 1.350           |             | 0 PERF   | 124.950 | 150   |              |                      |              |
| <b>L2</b>                      | 126.000         |             | 1 PERF   | 125.300 | 150   | 1200         | TYPE B CONC CATCHPIT | B125 600x600 |
| E. 329201.768<br>N. 343645.935 | 1.000           |             | 0 PERF   | 125.300 | 150   |              |                      |              |
| <b>L3</b>                      | 126.000         |             | 1 PERF   | 125.265 | 150   | 1200         | TYPE B CONC CATCHPIT | B125 600x600 |
| E. 329205.738<br>N. 343642.145 | 1.035           |             | 0 PERF   | 125.265 | 150   |              |                      |              |
| <b>L4</b>                      | 126.000         |             | 1 PERF   | 125.040 | 150   | 1200         | TYPE B CONC CATCHPIT | B125 600x600 |
| E. 329239.064<br>N. 343645.174 | 1.260           |             | 0 PERF   | 125.040 | 150   |              |                      |              |

#### NOTES

- ALL LEVELS AS SHOWN ARE AS PER TOPOGRAPHICAL SURVEY.
- CONSTRUCTION AND TESTING OF DRAINS AND SEWERS TO COMPLY WITH BS EN 1610. CONTRACTOR SHALL NOTE THAT TOLERANCES OF + OR - 5% OF THE PIPES INTERNAL DIAMETER MUST BE ACHIEVED UPTO A MAXIMUM OF 20mm
- FOR MANHOLE CONSTRUCTION INFORMATION REFER TO STANDARD DETAILS DRAWINGS.
- PRECAST MANHOLES SHALL COMPLY WITH BS EN 1917
- POLYPROPYLENE CHAMBERS TO COMPLY WITH BS 7158.
- BRICKWORK CHAMBERS WILL TO BE CONSTRUCTED FROM CLASS B ENGINEERING BRICKS COMPLYING WITH BS 3921. BRICKS SHALL ALSO BE FROST-RESISTANT CATEGORY F.
- CLAY PIPES TO COMPLY TO BS EN 295
- CONCRETE PIPES TO COMPLY TO BS EN 1916
- TYPE OF PIPE "PERF" REFERS TO PERFORATED FILTER DRAINS TO COMPLY TO BS 4962.
- PLASTIC PIPE ALTERNATIVES  
IN NON-AGGRESSIVE SOIL CONDITIONS PLASTIC PIPE ALTERNATIVES WILL BE DEEMED ACCEPTABLE. IF THE CONTRACTOR INTENDS TO USE PLASTIC PIPEWORK IN ACCORDANCE WITH BS 4660 - THE FOLLOWING STANDARDS WILL BE REQUIRED:

DRAINAGE CONNECTIONS OF LESS THAN 150Ø SHALL BE SOLID WALL uPVC PIPES COMPLYING WITH BS EN 1401-1

PIPE SIZES 150-900Ø (TO BE USED IN FOUL OR COMBINED FLOW DRAINAGE SYSTEMS) SHALL BE THERMOPLASTIC STRUCTURED WALL PIPE COMPLYING WITH WIS 4-35-01

PIPE SIZES 150-900Ø (TO BE USED IN SURFACE WATER DRAINAGE SYSTEMS) SHALL BE THERMOPLASTIC STRUCTURED WALL PIPES WITH BBA & HAPAS ACCREDITATION.

THE CONTRACTOR SHALL SUBMIT DETAILS OF THE PROPOSED PLASTIC PRODUCTS FOR APPROVAL BY THE ENGINEER.

11. THE CONTRACTOR SHALL ALSO NOTE THAT CONNECTIONS TO PUBLIC SEWERS & MATERIALS USED IS SUBJECT TO AGREEMENT WITH THE ADOPTING AUTHORITY AND THE CONTRACTOR SHALL THEREFORE ASSUME THAT TRADITIONAL MATERIALS MUST BE USED UNLESS EXPRESSIVELY INFORMED OTHERWISE.

12. MOULDED PPIC BASES HAVE A CAST IN SLOPE OF 20mm ACROSS THE MAIN CHANNEL AND A STEP OF 75mm FROM THE MAIN CHANNEL TO INCOMING BRANCHES WHERE PPIC MANHOLES ARE SHOWN. LEVELS HAVE BEEN CALCULATED TO REFLECT THE SLOPE / STEP AS NECESSARY.

13. MOULDED MINI PPIC BASES HAVE A CAST IN SLOPE OF 20mm ACROSS THE MAIN CHANNEL AND A STEP OF 35mm FROM THE MAIN CHANNEL TO INCOMING BRANCHES. WHERE MINI PPIC MANHOLES ARE SHOWN, LEVELS HAVE BEEN CALCULATED TO REFLECT THE SLOPE / STEP AS NECESSARY.

|     |                  |    |     |     |          |
|-----|------------------|----|-----|-----|----------|
|     |                  |    |     |     |          |
| P02 | DESIGN DEVELOPED | RH | MM  | JP  | 18.03.21 |
| REV | DESCRIPTION      | BY | CHK | APR | DATE     |

|                                                                |                                 |
|----------------------------------------------------------------|---------------------------------|
|                                                                |                                 |
| PURPOSE OF ISSUE<br><b>PRELIMINARY</b>                         | STATUS<br><b>-</b>              |
| PROJECT<br><b>WYNNSTAY PARK RUABON</b>                         |                                 |
| TITLE<br><b>DRAINAGE SCHEME SURFACE WATER MANHOLE SCHEDULE</b> |                                 |
| CLIENT<br>                                                     |                                 |
| DRAWN BY<br><b>RH</b>                                          | CHECKED BY<br><b>MM</b>         |
| APPROVED BY<br><b>JP</b>                                       |                                 |
| DATE<br><b>08.03.2021</b>                                      | SCALE (@ A1)<br><b>As Shown</b> |
| PROJECT NUMBER<br><b>19010</b>                                 |                                 |
| DRAWING NUMBER<br><b>504</b>                                   |                                 |
| REV<br><b>P02</b>                                              |                                 |